

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

**RECEIVED**

SEP 25 2003

EMRE LAW DEPT.

VCL

To:  
EXXONMOBIL RESEARCH AND ENGINEERING  
COMPANY  
Attn: Brumlik, Charles J.  
P.O. Box 900  
1545 Route 22 East  
Annandale, New Jersey 08801-0900  
UNITED STATES OF AMERICA

Date of mailing  
(day month year)

23/09/2003

Applicant's or agent's file reference

P2001J067

**FOR FURTHER ACTION**

See paragraphs 1 and 4 below

International application No.

PCT/US 02/ 32760

International filing date  
(day month year)

15/10/2002

Applicant

EXXONMOBIL RESEARCH AND ENGINEERING COMPANY

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46).

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: +41-22-740.14.35

**For more detailed instructions,** see the notes on the accompanying sheet

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith

3. ☐ **With regard to the protest** against payment of any additional fees under Rule 40.1, the applicant is notified that

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest, the applicant will be notified as soon as a decision is made

4. **Further action(s):** The applicant is reminded of the following

Shortly after **18 months** from the priority date, the international application will be published by the international Bureau. If the applicant wishes to avoid or postpone publication or withdrawal of the international application, or if the priority claim, must reach the international Bureau as provided in Rules 40bis 1 and 40bis 3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, the applicant must perform the prescribed administrative steps if the applicant wishes to postpone the entry of the international phase within 3 months from the priority date, in accordance with Rule 40bis 3.

Within **20 months** from the priority date, the applicant must perform the prescribed administrative steps if the applicant wishes to postpone the entry of the international phase before the designated Offices which have been designated in the International Search Report within 3 months from the priority date, in accordance with Rule 40bis 3, respectively, before the completion of the technical preparations for international publication.

Name and address of the International Searching Authority



European Patent Office  
P.O. Box 1  
8001 Zurich, Switzerland  
Fax: +41-43-241 95 11

Authorized official

Nathan Hing

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>P2001J067</b>	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/US 02/ 32760</b>	International filing date ( <i>day/month/year</i> ) <b>15/10/2002</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>13/11/2001</b>
Applicant  <b>EXXONMOBIL RESEARCH AND ENGINEERING COMPANY</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 02/32760

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B01J38/00 C10G2/00 C07C1/04

According to international patent classification, the invention is classified in class

## B. FIELDS SEARCHED

Minimum documentation searched in classification system for World Patent Classification, Sections

IPC 7 C10G C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (electronic data base and, where practical, search reports used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	WO 01 36352 A (CONOCO INC) 25 May 2001 (2001-05-25) page 8, last paragraph -page 9, paragraph 2; example 1 page 5, paragraph 1 page 7, paragraph 3 page 14, paragraph 1 ---	1-17
Y	US 5 817 702 A (BEHRMANN WILLIAM C ET AL) 6 October 1998 (1998-10-06) column 7, paragraph 1: claim 1 column 4, paragraph 1 ---	1-17
A	US 2 472 501 A (SWEETSER SUMNER B) 7 June 1949 (1949-06-07) column 3, paragraph 3: claim 1: figure 1 column 6, paragraph 1 ---	1.2.5-8. 13.14
	--- -/-	



Further documents are cited in the configuration of pages



Patent law provisions are listed in annex

### Special categories of cited documents

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*F\* document which may throw doubts on priority claim(s) which has failed to establish the published date of the citation or other special reason was specified

\*G\* document referring to state of the art (state of the art) by other means

\*H\* document published prior to the international filing date but later than the priority date claimed

\*\* later document published prior to the international filing date, or priority date, and not in conflict with the application but cited to understand the principles of the invention underlying the invention

\*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken into account

\*Y\* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is taken into account with the other prior art documents specified in the international search report

\*Z\* document mentioned in the same patent family

Date of the report: completion of the international search

Date of receipt of the international search report

15 September 2003

23/09/2003

Name and address of the ISA

European Patent Office  
Patent Department  
Case Management  
Case Management  
Case Management

Name and address of the ISA

Gilliquet, J-A

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 02/32760

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 530 998 A (SCHARMANN WALTER G) 21 November 1950 (1950-11-21) column 7, paragraph 2; claims 1,2; example 1 ----	1-3,5-9, 13,14
A	US 5 844 005 A (FIATO ROCCO A ET AL) 1 December 1998 (1998-12-01) column 9, paragraph 2 column 6, line 45 - line 50 ----	1,13,16, 17
A	US 5 958 986 A (MART CHARLES JOHN ET AL) 28 September 1999 (1999-09-28) column 8, paragraph 3; claim 1; figure 1 ----	1,13,16, 17
A	EP 0 363 537 A (EXXON RESEARCH ENGINEERING CO) 18 April 1990 (1990-04-18) page 4, paragraph 3 -----	1,13

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/32760

Patent document and search report	Classification date	Patent family members	Publication date
WO 0136352	A	25-05-2001	US 6486220 B1 26-11-2002
			AU 2043401 A 30-05-2001
			CA 2392177 A1 25-05-2001
			EP 1235938 A2 28-08-2002
			WO 0136352 A1 25-05-2001
			US 2002193096 A1 26-12-2002
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			AU 7170398 A 27-11-1998
			BR 9809377 A 04-07-2000
			DE 69307860 D1 17-10-2002
			DE 69307860 T2 16-01-2003
			EP 0979255 A1 16-02-2000
			JP 2002512649 T 23-04-2002
			NO 995333 A 20-12-1999
			WO 9850486 A1 12-11-1998
			ZA 9803634 A 06-11-1998
US 2472501	A	07-06-1949	NONE
US 2530998	A	21-11-1950	NONE
US 5844005	A	01-12-1998	AU 742415 B2 03-01-2002
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			DE 69308751 D1 21-11-2002
			DE 69308751 T2 12-06-2003
			EP 0979257 A1 16-02-2000
			JP 2001524024 T 27-11-2001
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			DE 69807507 T2 16-01-2003
			EP 1015528 A1 05-07-2000
			JP 2002512651 T 23-04-2002
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			WO 9850490 A1 12-11-1998
			ZA 9803687 A 06-11-1998
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			JF 2073023 A 13-03-1990
			JP 2557959 B2 27-11-1996
			US 4794099 A 27-12-1988
			AU 614777 B2 12-09-1991
			AU 2090688 A 26-04-1990
			EP 0363537 A1 18-04-1990

